

SLEEVE FOR PIG-TAILING OPTICAL FIBER

ABSTRACT OF THE DISCLOSURE

A sleeve (22) enables attachment of an optic fiber (14) to a multi-integrated optic chip (10) in optical communication therewith, and maintains alignment of the fiber at its end adjacent the chip. The sleeve includes a symmetrically-shaped cavity (26) bounded by termini (30, 32) which are respectively disposed to fit onto the chip and to accept the fiber. An adhesive (46) within the cavity symmetrically bonds the fiber to the chip. The adhesive cures symmetrically in the cavity, to eliminate undesired motion of the fiber from its preferred alignment position vis-a-vis the chip connection point (12) or to provide a repeatable motion to achieve the optimum alignment position of the fiber with respect to the chip. The sleeve may be left in place or, alternatively, it may be removed. The sleeve controls, defines and confines the index matching adhesive and/or fluid between fiber end (44) and connection point (12) by defining the areas and volume actually in contact with the adhesive or fluid. Symmetry is preserved over the effects of gravity and wicking which heretofore have prevented a very symmetrical pigtail which is necessary for performance and repeatability.

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